

# 10/590,899-286912-EIC SEARCH

## SEARCH

=> d his l15

(FILE 'HCAPLUS' ENTERED AT 08:44:18 ON 10 MAR 2009)

L15 18 S L11 OR L12 OR L14  
SAV TEMP L15 GAR899HCP/A

=> d que stat l15

L2 9 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON (203518-71-2/  
BI OR 2085-33-8/BI OR 286383-62-8/BI OR 50926-11-9/BI  
OR 555-31-7/BI OR 693794-98-8/BI OR 7429-90-5/BI OR  
7789-24-4/BI OR 835-64-3/BI)  
L5 22 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 12500.71/RID  
L6 2 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L2 AND L5  
L7 18 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L5  
L8 11 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L6  
L9 18 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L7 OR L8  
L10 1524519 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON 73/SC,SX  
L11 17 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L9 AND L10  
L12 1 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L9 NOT L11  
L13 QUE SPE=ON ABB=ON PLU=ON ELECTROLUM!N? OR ORGANOLUM  
!N? OR (ELECTRO OR ORGANO OR ORG#) (2A)LUM!N? OR LIGHT?(  
2A) (EMIT? OR EMISSION?) OR EL OR E(W)L OR OLED OR L(W)E  
(W)D OR LED/IT  
L14 17 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L9 AND L13  
L15 18 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L11 OR L12 OR  
L14

SEARCH RESULTS

=&gt; d 115 1-18 ibib ed abs hitstr hitind

L15 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:594982 HCAPLUS Full-text

DOCUMENT NUMBER: 148:449720

TITLE: Ligand migration in the reaction of titanium complexes with AlMe<sub>3</sub>

AUTHOR(S): Kobylka, Michal J.; Jerzykiewicz, Lucjan B.; Patton, Jasson T.; Przybylak, Szymon; Utko, Jozef; Sobota, Piotr

CORPORATE SOURCE: Faculty of Chemistry, University of Wroclaw, Wroclaw, 50-383, Pol.

SOURCE: Collection of Czechoslovak Chemical Communications (2007), 72(4), 541-559  
CODEN: CCCCAK; ISSN: 0010-0765

PUBLISHER: Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 148:449720

ED Entered STN: 01 Jun 2007

AB Five different titanium compds.

cis-[Ti( $\eta^2$ -hbo)<sub>2</sub>(OEt)<sub>2</sub>] $\cdot$ 0.5toluene (1), cis-[TiCl<sub>2</sub>( $\eta^2$ -thp)<sub>2</sub>] (2), [TiCl<sub>2</sub>(edbp)<sub>2</sub>] (3), [Ti<sub>2</sub>( $\mu$ -OMe)<sub>2</sub>(edbp)<sub>2</sub>(Me)<sub>2</sub>] (6), [Ti<sub>2</sub>( $\mu$ -OMe)<sub>2</sub>(edbp)<sub>2</sub>(OMe)<sub>2</sub>] (7) (Hhbo = 2-(2-hydroxyphenyl)benzoxazole, Hthp = tetrahydropyran-2-methanol, H2edbp = 2,2'-ethyldienebis(4,6-di-tert-butylphenol)), have been prepared and tested in combination with MAO as catalysts for propene polymerization and ethene and oct-1-ene copolymn. with the aim of gaining insight into the structure of the active species. Investigation of the 1/AlMe<sub>3</sub> or 2/AlMe<sub>3</sub> systems resulted in isolation of [Al( $\eta^2$ -hbo)<sub>2</sub>(Me)] (4) and [Al<sub>2</sub>( $\mu^2$ - $\eta^2$ -thp)<sub>2</sub>(Me)<sub>4</sub>] (5) in high yields. This indicates that the trimethylaluminum contained in MAO abstrs. ligands from 1 or 2, affecting thus the catalytic performance of the 1,2/MAO catalysts. In contrast, compound 3 reacted with MAO affording methylated product 6. Accordingly, the 3/MAO catalyst differed from the above ones, furnishing at 70° e.g., narrow mol. weight polypropylene (Mn = 454 000; Mw/Mn = 2.49; Tm = 158.2°).

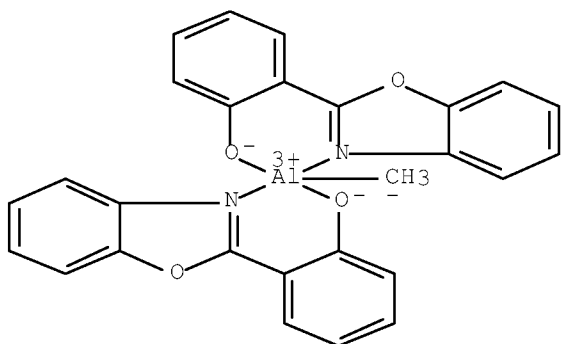
IT 1018829-98-5P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(crystal structure; preparation, structural characterization, and ligand migration in reaction of titanium complexes with trimethylaluminum)

RN 1018829-98-5 HCAPLUS

CN Aluminum, bis[2-(2-benzoxazolyl)- $\kappa$ N3]phenolato- $\kappa$ O]methyl-, (TB-5-22)- (CA INDEX NAME)



CC 29-10 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 35, 75, 78

IT 1018829-98-5P 1018829-99-6P 1018830-01-7P

1018830-02-8P 1018830-03-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP  
(Preparation)

(crystal structure; preparation, structural characterization, and  
ligand migration in reaction of titanium complexes with  
trimethylaluminum)

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L15 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2006:1312471 HCAPLUS Full-text

DOCUMENT NUMBER: 146:74032

TITLE: Preparation of organic metal complex and  
organic ~~electroluminescent~~ device  
using said complex

INVENTOR(S): Yamamoto, Toshihiro; Kai, Takahiro; Komori,  
Masaki; Miyazaki, Hiroshi

PATENT ASSIGNEE(S): Nippon Steel Chemical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 27pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006132173	A1	20061214	WO 2006-JP311203	

2006

0605

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,  
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,  
ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,  
KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,  
LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ,  
OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM,  
SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,  
ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,

# 10/590,899-286912-EIC SEARCH

HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI,  
SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,  
NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL,  
SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

CN 101193875	A	20080604	CN 2006-80020307	2007 1207
KR 2008021121	A	20080306	KR 2008-700400	2008 0107
US 20090026923	A1	20090129	US 2008-921001	2008 0122
PRIORITY APPLN. INFO.:			JP 2005-166581	A 2005 0607
			WO 2006-JP311203	W 2006 0605

OTHER SOURCE(S): MARPAT 146:74032

ED Entered STN: 15 Dec 2006

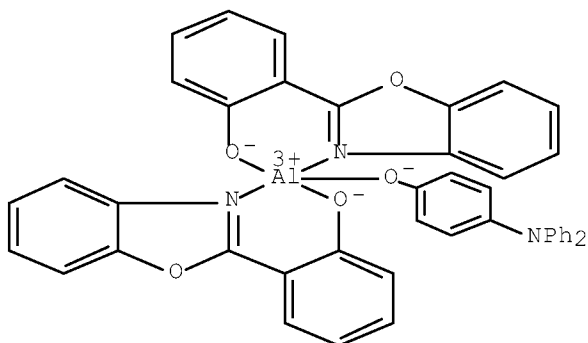
AB Claimed is an organic metal complex L2M-O-Ar1-N(Ar2) (Ar3) (Ar1 represents an optionally substituted aromatic hydrocarbon group or a heteroarom. group; Ar2 and Ar3 represent an optionally substituted aromatic hydrocarbon group or a heteroarom. group; M represents a trivalent metal; and L represents an (un)substituted arylate or heteroarylate ligand containing a heterocyclic moiety having at least one nitrogen atom coordinatable with M as a ring-constituting atom). This organic metal complex is suitable as a material which constitutes a ~~light-emitting~~ layer of an organic EL device together with a phosphorescent dopant. Thus, reacting aluminum triisopropoxide with 2-(2-hydroxyphenyl)benzoxazole and 4-diphenylaminophenol in toluene at 60°C gave an organic metal complex; an organic ~~electroluminescent~~ device containing said organic metal complex and tris(2-phenylpyridine) iridium complex showed high luminous efficiency.

IT 916851-16-6P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of organic metal complex and organic ~~electroluminescent~~ device using said complex)

RN 916851-16-6 HCAPLUS

CN Aluminum, bis[2-(2-benzoxazolyl)-κN3]phenolato-κO][4-(diphenylamino)phenolato-κO]- (CA INDEX NAME)



## 10/590,899-286912-EIC SEARCH

CC 78-7 (Inorganic Chemicals and Reactions)  
 Section cross-reference(s): 73, 74

ST hydroxyphenylbenzoxazole diphenylaminophenol aluminum complex  
 prepn electroluminescent device; org metal complex prepn  
 electroluminescent device

IT Coordination compounds  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered  
 material use); PREP (Preparation); USES (Uses)  
 (organic; preparation of organic metal complex and organic  
 electroluminescent device using said complex)

IT Dopants  
 (phosphorescent; preparation of organic metal complex and organic  
 electroluminescent device containing said complex and  
 phosphorescent dopant)

IT Electroluminescent devices  
 (preparation of organic metal complex and organic  
 electroluminescent device using said complex)

IT 555-31-7, Aluminum triisopropoxide 835-64-3,  
 2-(2-Hydroxyphenyl)benzoxazole 25069-86-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of organic metal complex and organic  
 electroluminescent device using said complex)

IT 916851-16-6P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered  
 material use); PREP (Preparation); USES (Uses)  
 (preparation of organic metal complex and organic  
 electroluminescent device using said complex)

IT 693794-98-8, Tris(2-phenylpyridine)iridium  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (preparation of organic metal complex and organic  
 electroluminescent device using said complex)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L15 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:1027133 HCAPLUS Full-text  
 DOCUMENT NUMBER: 143:315242  
 TITLE: Organic electroluminescent device  
 INVENTOR(S): Fukumatsu, Takayuki; Miyazaki, Hiroshi  
 PATENT ASSIGNEE(S): Nippon Steel Chemical Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 35 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

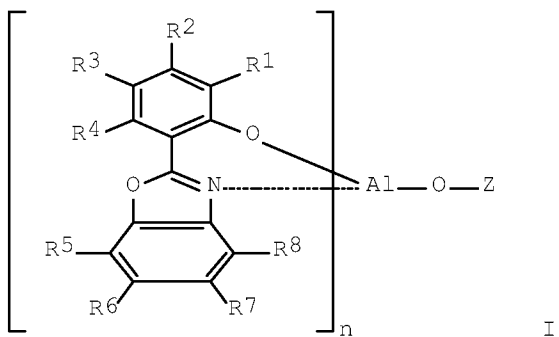
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2005089025	A1	20050922	WO 2005-JP3764	2005 0304

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,  
 CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,  
 ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,  
 KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,

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MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL,  
PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN,  
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH,  
CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT,  
LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF,  
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
CN 1934907 A 20070321 CN 2005-80008340 2005  
0304  
KR 2006135024 A 20061228 KR 2006-721275 2006  
1013  
US 20070254182 A1 20071101 US 2007-590899 2007  
0104  
PRIORITY APPLN. INFO.: JP 2004-72504 A 2004  
0315  
JP 2004-72505 A 2004  
0315  
WO 2005-JP3764 W 2005  
0304

OTHER SOURCE(S): MARPAT 143:315242  
ED Entered STN: 23 Sep 2005  
GI



AB Disclosed is an organic ~~electroluminescent~~ device (organic EL device) which has a simple structure and utilizes phosphorescence. The organic ~~electroluminescent~~ device is improved in luminous efficiency and secured of sufficient driving stability. Such an organic ~~electroluminescent~~ device comprises a ~~light-emitting~~ layer or a plurality of organic compound thin film layers including a ~~light-emitting~~ layer formed between a pair of electrodes. The ~~light-emitting~~ layer contains a compound composed of an Al complex of an

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oxyphenylbenzoxazole which is represented by the general formula I as a host material, while containing an organic metal complex including Ru, Rh, Pd, Ag, Re, Os, Ir, Pt or Au as a guest material, where R1-R8 independently represent a hydrogen atom, an alkyl group, an aromatic group or the like; n represents 2 or 4; and Z represents an aromatic group, a triarylsilyl group or the like when n is 2, while representing Al(III) when n is 4.

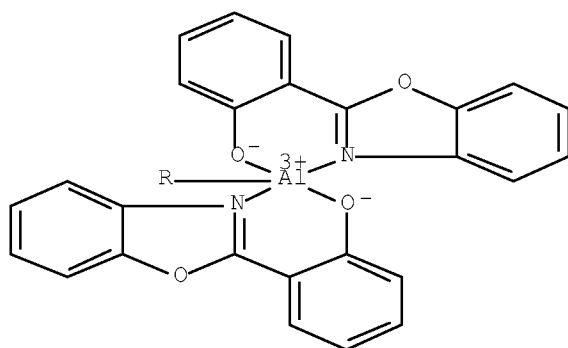
IT 203518-71-2P 286383-62-8P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(organic electroluminescent device)

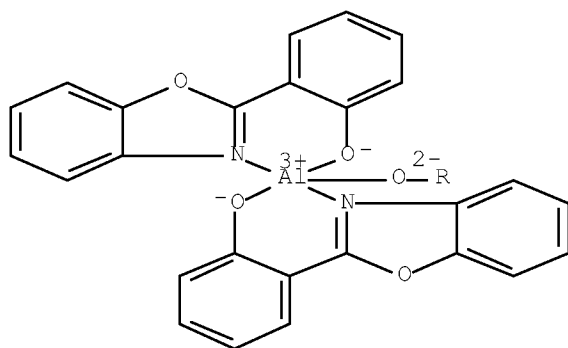
RN 203518-71-2 HCAPLUS

CN Aluminum, tetrakis[2-(2-benzoxazolyl-κN3)phenolato-κO]-μ-oxodi- (CA INDEX NAME)

PAGE 1-A

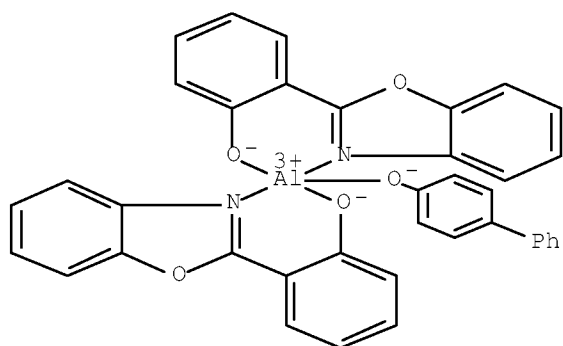


PAGE 2-A



RN 286383-62-8 HCAPLUS

CN Aluminum, bis[2-(2-benzoxazolyl-κN3)phenolato-κO][[1,1'-biphenyl]-4-olato]- (9CI) (CA INDEX NAME)



IC ICM H05B033-14  
ICS C07D263-56; C09K011-06  
CC 73-11 (Optical, Electron, and Mass Spectroscopy and  
Other Related Properties)  
Section cross-reference(s): 28, 74  
ST org **electroluminescent** device metal oxaphenylbenzoxazole  
IT **Electroluminescent** devices  
(organic **electroluminescent** device)  
IT 2085-33-8, Alq3 7429-90-5, Aluminum, uses 7789-24-4, Lithium  
fluoride, uses 50926-11-9, ITO 693794-98-8  
RL: DEV (Device component use); USES (Uses)  
(organic **electroluminescent** device)  
IT 203518-71-2P 286383-62-8P  
RL: DEV (Device component use); SPN (Synthetic preparation); PREP  
(Preparation); USES (Uses)  
(organic **electroluminescent** device)  
IT 555-31-7, Aluminumtriisopropoxide 835-64-3,  
2, -(2-Hydroxyphenyl)benzoxazole  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(organic **electroluminescent** device)  
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L15 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2003:609758 HCAPLUS Full-text  
DOCUMENT NUMBER: 139:171099  
TITLE: Organic **light-emitting**  
devices employing phosphorescent material  
doped into the electron-transporting layer  
INVENTOR(S): Yamazaki, Hiroko; Tokuda, Atsushi; Tsutsui,  
Tetsuo  
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., USA  
SOURCE: U.S. Pat. Appl. Publ., 27 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20030146443	A1	20030807	US 2002-304410	

## 10/590,899-286912-EIC SEARCH

					2002
					1126
US	6734457	B2	20040511		
JP	2003229275	A	20030815	JP 2002-341774	
					2002
					1126
JP	3759925	B2	20060329		
US	20040124425	A1	20040701	US 2003-737569	
					2003
					1216
US	7473575	B2	20090106		
JP	2005101002	A	20050414	JP 2004-360371	
					2004
					1213
US	20080143254	A1	20080619	US 2007-976781	
					2007
					1029
US	7482626	B2	20090127		
PRIORITY APPLN. INFO.:				JP 2001-360500	A
					2001
					1127
				JP 2002-341774	A3
					2002
					1126
				US 2002-304410	A1
					2002
					1126
				US 2003-737569	A1
					2003
					1216

ED Entered STN: 08 Aug 2003

AB ~~Light-emitting~~ devices are described which comprise an anode, an optional hole-injection layer in contact with the anode, an organic compound film, an optional electron-injection layer in contact with a cathode, and a cathode, where the organic compound film comprises a hole-transporting layer containing a hole-transporting material; and an electron-transporting layer in contact with the hole-transporting layer and containing an electron-transporting material, where a ~~light- emitting~~ material capable of ~~emitting light~~ from a triplet excited state is added in the electron transporting layer.

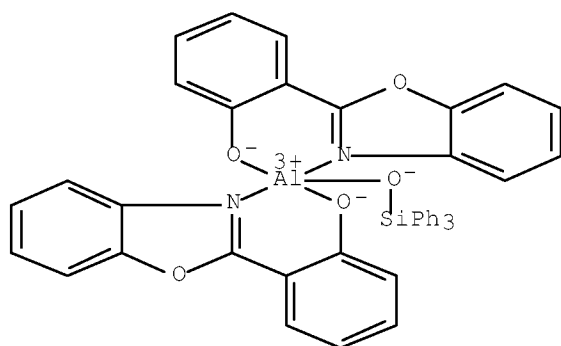
IT 573968-22-6

RL: DEV (Device component use); USES (Uses)

(electron-transporting layer; organic ~~light-emitting~~ devices employing phosphorescent material doped in electron-transporting layer)

RN 573968-22-6 HCAPLUS

CN Aluminum, bis[2-(2-benzoxazolyl-κN3)phenolato-κO](triphenylsilanolato)- (9CI) (CA INDEX NAME)



IC ICM H01L027-15  
 INCL 257080000  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and  
 Other Related Properties)  
 Section cross-reference(s): 22, 76, 78  
 ST org electroluminescent device phosphorescent dopant  
 IT Phosphorescent substances  
 (organic light-emitting devices employing  
 phosphorescent material doped in electron-transporting layer)  
 IT Electroluminescent devices  
 (organic, phosphorescent; organic light-emitting  
 devices employing phosphorescent material doped in  
 electron-transporting layer)  
 IT 192198-85-9 573968-21-5  
 RL: DEV (Device component use); PRP (Properties); USES (Uses)  
 (doped electron-transporting and phosphorescent layer; organic  
 light-emitting devices employing  
 phosphorescent material doped in electron-transporting layer)  
 IT 2085-33-8, Tris(8-quinolinolato)aluminum 29190-60-1 47464-14-2  
 146162-54-1, Bis(2-methyl-8-quinolinolato)(4-  
 phenylphenolato)aluminum 259228-55-2 573968-22-6  
 573968-23-7  
 RL: DEV (Device component use); USES (Uses)  
 (electron-transporting layer; organic light-  
 emitting devices employing phosphorescent material  
 doped in electron-transporting layer)  
 IT 157077-25-3 338949-42-1 500899-10-5  
 RL: DEV (Device component use); PRP (Properties); USES (Uses)  
 (electron-transporting layer; organic light-  
 emitting devices employing phosphorescent material  
 doped in electron-transporting layer)  
 IT 134257-64-0 148044-07-9 163815-23-4 168091-66-5  
 573968-20-4  
 RL: DEV (Device component use); PRP (Properties); USES (Uses)  
 (hole-transporting layer; organic light-emitting  
 devices employing phosphorescent material doped in  
 electron-transporting layer)  
 IT 337526-85-9 376367-93-0  
 RL: DEV (Device component use); MOA (Modifier or additive use);  
 PRP (Properties); USES (Uses)  
 (phosphorescent dopant; organic light-emitting  
 devices employing phosphorescent material doped in  
 electron-transporting layer)  
 REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE

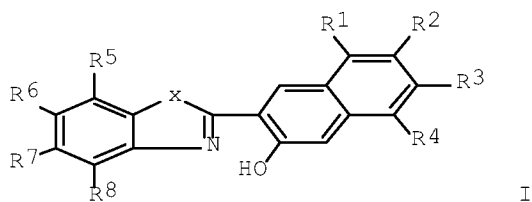
## 10/590,899-286912-EIC SEARCH

FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L15 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2003:214869 HCAPLUS Full-text  
 DOCUMENT NUMBER: 138:262448  
 TITLE: Electroluminescent devices with high  
 luminance  
 INVENTOR(S): Enomoto, Kazuhiro  
 PATENT ASSIGNEE(S): Sharp Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	
JP 2003082341	A	20030319	JP 2001-272328	2001 0907
PRIORITY APPLN. INFO.:			JP 2001-272328	2001 0907

OTHER SOURCE(S): MARPAT 138:262448  
 ED Entered STN: 19 Mar 2003  
 GI



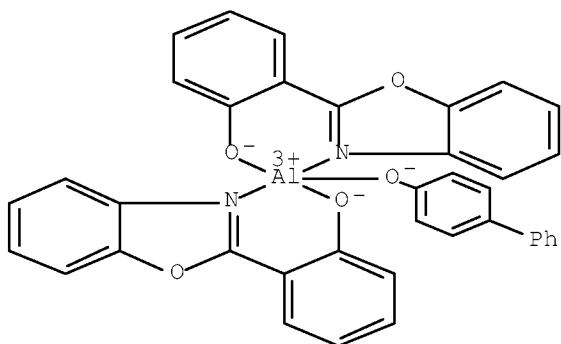
AB In the devices having  $\geq 1$  organic layers between anodes and cathodes, the organic layers comprise metal complexes having I ligands (X = O, S, NH; R1-R8 = lower alkyl or alkoxy, halo, H; adjacent R1-R8 may form aromatic ring). The metal complexes show high glass transition temperature, good film-forming and electron-transporting properties, and high thermal stability.

IT 286383-62-8

RL: DEV (Device component use); USES (Uses)  
 (light-emitting layers; high-luminance  
 electroluminescent devices containing heat-resistant metal  
 complexes)

RN 286383-62-8 HCAPLUS

CN Aluminum, bis[2-(2-benzoxazolyl)- $\kappa$ N3]phenolato-  
 $\kappa$ O][[1,1'-biphenyl]-4-olato]- (9CI) (CA INDEX NAME)



IC ICM C09K011-06  
ICS H05B033-14; H05B033-22

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

ST metal complex **electroluminescent** device luminance improvement; thermal stability metal complex **electroluminescent** device; benzoxazole complex **electroluminescent** device luminance improvement; benzimidazole complex **electroluminescent** device luminance improvement; benzothiazole complex **electroluminescent** device luminance improvement

IT Ligands  
RL: DEV (Device component use); USES (Uses)  
(complexes, light-emitting layers; high-luminance **electroluminescent** devices containing heat-resistant metal complexes)

IT **Electroluminescent** devices  
(high-luminance **electroluminescent** devices containing heat-resistant metal complexes)

IT 56235-91-7,  $\alpha$ -Naphthol lithium salt  
RL: DEV (Device component use); USES (Uses)  
(electron-barrier layers; high-luminance **electroluminescent** devices containing heat-resistant metal complexes)

IT 157759-29-0  
RL: DEV (Device component use); USES (Uses)  
(hole-transporting layers; high-luminance **electroluminescent** devices containing heat-resistant metal complexes)

IT 128904-10-9 286383-62-8 502634-83-5 502634-84-6  
502634-85-7 502634-86-8 502634-87-9 502634-88-0  
502634-89-1 502634-90-4 502634-91-5 502634-92-6  
502634-93-7 502634-94-8 502634-95-9 502634-96-0  
502634-97-1 502634-98-2 502689-07-8  
RL: DEV (Device component use); USES (Uses)  
(light-emitting layers; high-luminance **electroluminescent** devices containing heat-resistant metal complexes)

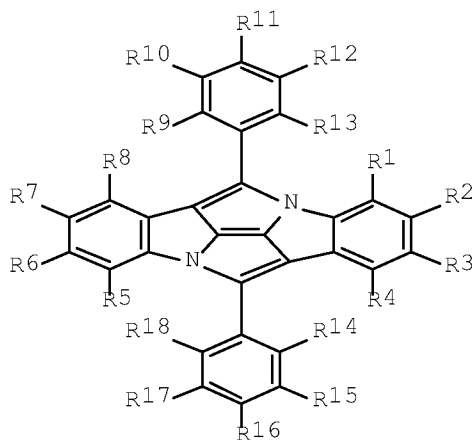
L15 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2000:686841 HCAPLUS Full-text  
DOCUMENT NUMBER: 133:259119  
TITLE: Organic **electroluminescent** component  
INVENTOR(S): Takahashi, Takamitsu; Iizumi, Yasuhiro

# 10/590,899-286912-EIC SEARCH

PATENT ASSIGNEE(S): Futaba Denshi Kogyo Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

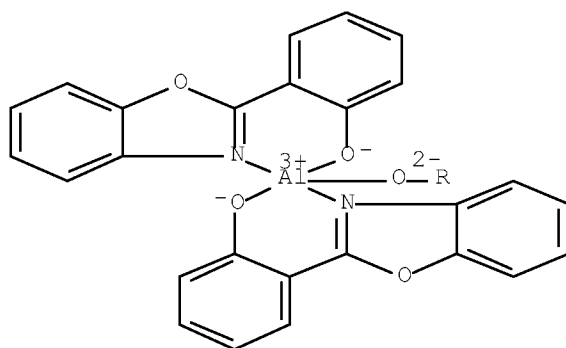
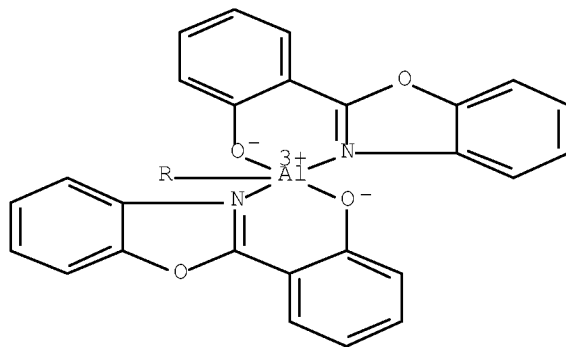
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000268962	A	20000929	JP 1999-73983	1999 0318
PRIORITY APPLN. INFO.:				JP 1999-73983 1999 0318

OTHER SOURCE(S): MARPAT 133:259119  
 ED Entered STN: 29 Sep 2000  
 GI



I

AB The invention refers to an organic electroluminescent component I [R1-22 = H, halo, OH, mercapto, cyano, amino nitro, (un)substituted alkyl, alkoxy, alkylthio, N-mono-alkylamino, N, N-dialkylamino, aryl, aryloxy, arylthio, or heterocyclic ring].  
 IT 203518-71-2  
 RL: DEV (Device component use); USES (Uses)  
 (organic electroluminescent component)  
 RN 203518-71-2 HCAPLUS  
 CN Aluminum, tetrakis[2-(2-benzoxazolyl-κN3)phenolato-κO]-μ-oxodi- (CA INDEX NAME)



IC ICM H05B033-14  
 ICS C09K011-06; H05B033-22  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and  
 Other Related Properties)  
 ST org electroluminescent material phosphor  
 IT Phosphors  
 (electroluminescent; organic electroluminescent  
 component)  
 IT 147-14-8, Copper phthalocyanine 2085-33-8, Aluminum  
 tris(8-hydroxyquinolinato) 7429-90-5, Aluminum, uses  
 7789-24-4, Lithium fluoride, uses 50926-11-9, ITO 123847-85-8  
 203518-71-2 294635-35-1 294635-36-2 294635-37-3  
 RL: DEV (Device component use); USES (Uses)  
 (organic electroluminescent component)

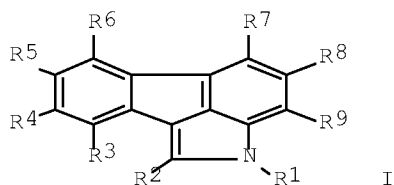
L15 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2000:686840 HCAPLUS Full-text  
 DOCUMENT NUMBER: 133:259118  
 TITLE: Organic electroluminescent component  
 INVENTOR(S): Takahashi, Hisamitsu; Iizumi, Yasuhiro  
 PATENT ASSIGNEE(S): Futaba Denshi Kogyo Co., Ltd., Japan

# 10/590,899-286912-EIC SEARCH

SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000268961	A	20000929	JP 1999-72176	1999 0317
PRIORITY APPLN. INFO.:				JP 1999-72176 1999 0317

OTHER SOURCE(S): MARPAT 133:259118  
 ED Entered STN: 29 Sep 2000  
 GI

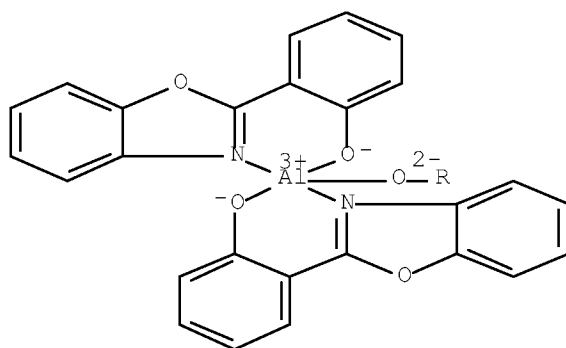
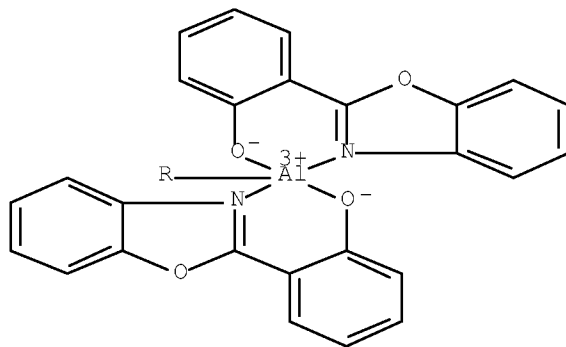


AB The invention refers to an organic ~~electroluminescent~~ component I [R1-9 = H, halo, OH, mercapto, cyano, amino nitro, (un)substituted alkyl, alkoxy, alkylthio, N-mono-alkylamino, N, N-dialkylamino, aryl, aryloxy, arylthio, or heterocyclic ring; and adjacent groups may join together to form (un)substituted aromatic or heterocyclic rings].

IT 203518-71-2  
 RL: DEV (Device component use); USES (Uses)  
 (organic ~~electroluminescent~~ component)

RN 203518-71-2 HCAPLUS

CN Aluminum, tetrakis[2-(2-benzoxazolyl-κN3)phenolato-κO]-  
 μ-oxodi- (CA INDEX NAME)



IC ICM H05B033-14  
 ICS C09K011-06; H05B033-22  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and  
 Other Related Properties)  
 ST org electroluminescent material phosphor  
 IT Phosphors  
 (electroluminescent; organic electroluminescent  
 component)  
 IT 147-14-8, Copper phthalocyanine 2085-33-8, Aluminum  
 tris(8-hydroxyquinolinato) 7429-90-5, Aluminum, uses  
 7789-24-4, Lithium fluoride, uses 50926-11-9, ITO 123847-85-8  
 203518-71-2 294638-61-2 294638-62-3 294638-63-4  
 294638-64-5 294638-65-6 294638-66-7 294638-67-8  
 RL: DEV (Device component use); USES (Uses)  
 (organic electroluminescent component)

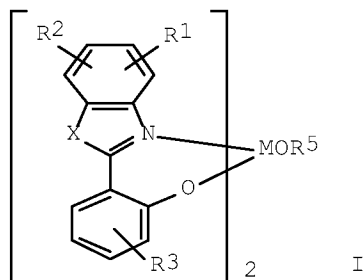
L15 ANSWER 8 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2000:484424 HCAPLUS Full-text  
 DOCUMENT NUMBER: 133:142421  
 TITLE: Organic electroluminescent devices  
 INVENTOR(S): Ueda, Hideaki; Hisamitsu, Satoshi; Furukawa,

## 10/590,899-286912-EIC SEARCH

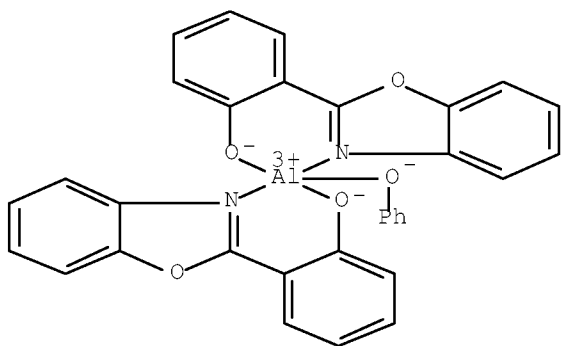
Keiichi  
 PATENT ASSIGNEE(S): Minolta Camera Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 35 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 2000200684	A	20000718	JP 1999-44828	1999 0223
JP 4045683	B2	20080213		
PRIORITY APPLN. INFO.:			JP 1998-313046	A 1998 1104

OTHER SOURCE(S): MARPAT 133:142421  
 ED Entered STN: 18 Jul 2000  
 GI

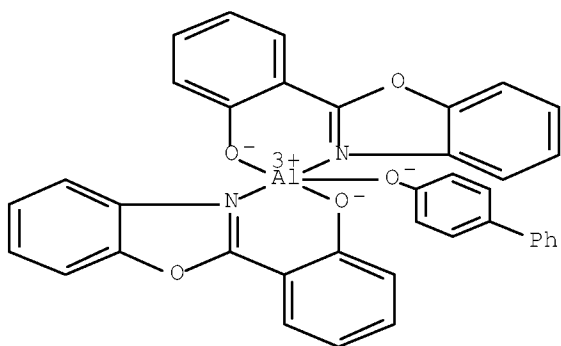


AB The devices comprise, as a phosphor and an electron transport material, I  
 (R1,2 = H, alkyl, alkoxy, halo; R1,2 may form condensed ring with benzene ring  
 associated with; R3 = H, alkyl, alkoxy, aryl; X = O, S, NR4; R4 = alkyl, aryl,  
 H; R5 = (each substituted) alkylcarbonyl, arylcarbonyl, alkenylcarbonyl, 3-  
 coumarinecarbonyl, 1,3-benzoxazol-5-carbonyl, phenoxyphenyl, phenylthiophenyl,  
 aryl, heterocyclic; M = Al, Ga).  
 IT 176045-96-8 286383-62-8 286383-63-9  
 286383-66-2  
 RL: DEV (Device component use); USES (Uses)  
 (organic electroluminescent devices containing aluminum and  
 gallium complex compds.)  
 RN 176045-96-8 HCAPLUS  
 CN Aluminum, bis[2-(2-benzoxazolyl-κN3)phenolato-  
 κO]phenoxy- (CA INDEX NAME)



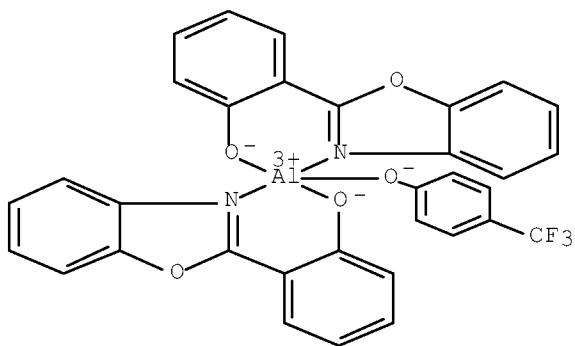
RN 286383-62-8 HCAPLUS

CN Aluminum, bis[2-(2-benzoxazolyl-κN3)phenolato-κO][[1,1'-biphenyl]-4-olato]- (9CI) (CA INDEX NAME)



RN 286383-63-9 HCAPLUS

CN Aluminum, bis[2-(2-benzoxazolyl-κN3)phenolato-κO][4-(trifluoromethyl)phenolato-κO]- (CA INDEX NAME)



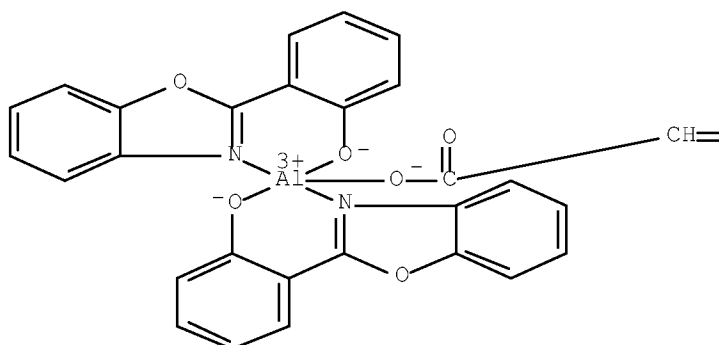
RN 286383-66-2 HCAPLUS

CN Aluminum, tetrakis[2-(2-benzoxazolyl-κN3)phenolato-

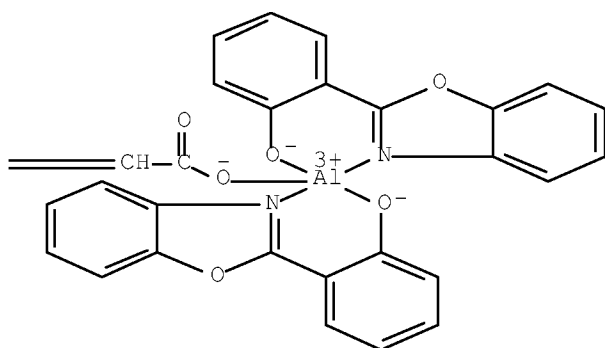
# 10/590,899-286912-EIC SEARCH

$\kappa O$ ] [ $\mu$ -[2-butenedioato(2-)- $\kappa O1:\kappa O4$ ]]di- (9CI)  
(CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM H05B033-14  
ICS C09K011-06  
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other  
Related Properties)  
ST org electroluminescence aluminum gallium complex device  
IT Electrodes  
Electroluminescent devices  
Glass substrates  
Radiation  
Surface  
(organic electroluminescent devices containing aluminum and  
gallium complex compds.)  
IT Coordination compounds  
RL: DEV (Device component use); USES (Uses)  
(organic electroluminescent devices containing aluminum and  
gallium complex compds.)  
IT 50926-11-9, ITO 124729-98-2 176045-96-8

## 10/590,899-286912-EIC SEARCH

286383-62-8 286383-63-9 286383-64-0  
 286383-65-1 286383-66-2 286383-67-3 286383-68-4  
 286383-69-5 286383-70-8 286383-71-9 286383-72-0  
 286383-73-1 286383-74-2 286383-75-3 286383-76-4  
 286383-77-5 286383-78-6

RL: DEV (Device component use); USES (Uses)  
 (organic ~~electroluminescent~~ devices containing aluminum and  
 gallium complex compds.)

IT 517-51-1, Rubrene

RL: MOA (Modifier or additive use); USES (Uses)  
 (organic ~~electroluminescent~~ devices containing aluminum and  
 gallium complex compds.)

L15 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2000:452333 HCAPLUS Full-text  
 DOCUMENT NUMBER: 133:81414  
 TITLE: Organometallic complexes for use in  
 light emitting devices  
 INVENTOR(S): Shi, Song Q.  
 PATENT ASSIGNEE(S): Motorola, Inc., USA  
 SOURCE: U.S., 16 pp., Cont.-in-part of U.S. Ser. No.  
 304,451.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
US 6083634	A	20000704	US 1997-886553	1997 0811
JP 08081472	A	19960326	JP 1995-256962	1995 0908
JP 2937827	B2	19990823		
PRIORITY APPLN. INFO.:			US 1994-304451	A2 1994 0912

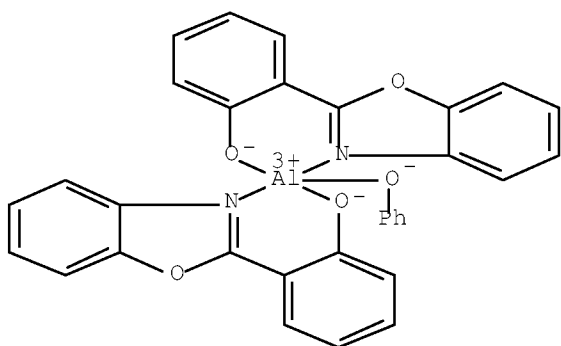
OTHER SOURCE(S): MARPAT 133:81414  
 ED Entered STN: 05 Jul 2000  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
 \*

AB Organic ~~light-emitting~~ devices are described which comprise a layer of  
 organometallic emissive material described by the general formulas I or II (M2  
 = divalent metal; M3 = trivalent metal; X = S, NH, or CH2; R1-8 and L1-5 = H  
 or hydrocarbon groups or functional groups selected from cyano, halogen,  
 haloalkyl, haloalkoxy, alkoxyl, amido, amino, sulfonyl, carbonyl, carbonyloxy  
 and oxycarbonyl). Methods of fabricating the devices entailing the deposition  
 of the emissive materials are also described. Examples in which X = O are  
 also presented.

# 10/590,899-286912-EIC SEARCH

IT 176045-96-8P  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)  
 (light-emitting devices using organometallic complexes and their fabrication)  
 RN 176045-96-8 HCAPLUS  
 CN Aluminum, bis[2-(2-benzoxazolyl-κN3)phenolato-κO]phenoxy- (CA INDEX NAME)



IC ICM H05B033-14  
 INCL 428690000  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 Section cross-reference(s): 76, 78  
 ST organometallic complex light emitting device; oxyphenylbenzimidazole complex light emitting device; oxyphenylindole complex light emitting device; oxyphenylbenzothiazole complex light emitting device  
 IT Electroluminescent devices  
 Electroluminescent devices  
 Semiconductor device fabrication  
 (light-emitting devices using organometallic complexes and their fabrication)  
 IT 7429-90-5D, Aluminum, organometallic compds., uses 7439-95-4D, Magnesium, organometallic compds., uses 7440-41-7D, Beryllium, organometallic compds., uses 7440-55-3D, Gallium, organometallic compds., uses 7440-66-6D, Zinc, organometallic compds., uses 7440-74-6D, Indium, organometallic compds., uses 23467-27-8  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (light-emitting devices using organometallic complexes and their fabrication)  
 IT 128904-10-9P 176045-96-8P  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)  
 (light-emitting devices using organometallic complexes and their fabrication)  
 IT 108-95-2, Phenol, reactions 835-64-3, 2-(2-Hydroxyphenyl) benzoxazole 7446-70-0, Aluminum chloride, reactions 13510-49-1, Beryllium sulfate

## 10/590,899-286912-EIC SEARCH

RL: RCT (Reactant); RACT (Reactant or reagent)

(light-emitting devices using

organometallic complexes and their fabrication)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L15 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:418166 HCAPLUS Full-text

DOCUMENT NUMBER: 133:50911

TITLE: Organic EL devices

INVENTOR(S): Takahashi, Takamitsu; Iizumi, Yasuhiro

PATENT ASSIGNEE(S): Futaba Denshi Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2000173777	A	20000623	JP 1998-350027	1998 1209
JP 3952616	B2	20070801		
PRIORITY APPLN. INFO.:			JP 1998-350027	1998 1209

ED Entered STN: 23 Jun 2000

AB The devices comprise: (1) a glass substrate; (2) an ITO anode (ionization potential  $I = I_1$ ); (3) a hole-blocking layer ( $I = I_2 = I_1 + 0.6$  eV) comprising  $Al_2O_3$  for blocking a hole transport from (2); (4) a hole transport layer having a 1st and a 2nd area contacting with and without (3), resp.; (5) an electron-transport phosphor layer; and (6) a cathode layer.

IT 203518-71-2

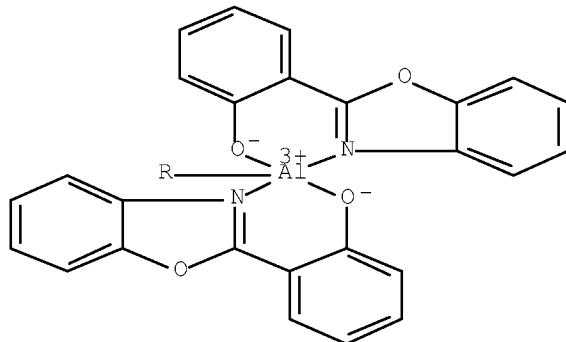
RL: DEV (Device component use); USES (Uses)

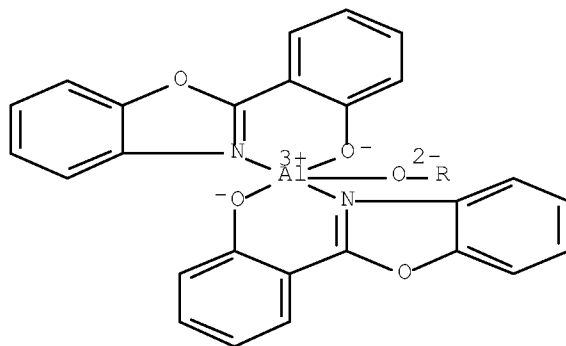
(organic EL devices)

RN 203518-71-2 HCAPLUS

CN Aluminum, tetrakis[2-(2-benzoxazolyl- $\kappa N3$ )phenolato- $\kappa O$ ]- $\mu$ -oxodi- (CA INDEX NAME)

PAGE 1-A





IC ICM H05B033-22  
ICS C09K011-06; H05B033-14  
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other  
Related Properties)  
ST org ~~electroluminescent~~ ITO hole blocking layer  
IT Anodes  
Cathodes  
Electroluminescent devices  
Electron transport  
Glass substrates  
Hole (electron)  
Hole transport  
Ionization potential  
(organic EL devices)  
IT 147-14-8, Copper phthalocyanine 2085-33-8,  
Tris(8-quinolinolato)aluminum 50926-11-9, ITO 123847-85-8,  
[1,1'-Biphenyl]-4,4'-diamine,  
N,N'-di-1-naphthalenyl-N,N'-diphenyl- 203518-71-2  
RL: DEV (Device component use); USES (Uses)  
(organic EL devices)

L15 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2000:198223 HCAPLUS Full-text  
DOCUMENT NUMBER: 132:229324  
TITLE: Organic ~~electroluminescent~~ component  
INVENTOR(S): Takahashi, Naomitsu; Miyauchi, Kazuo;  
Tsuruoka, Masahisa  
PATENT ASSIGNEE(S): Futaba Denshi Kogyo Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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# 10/590,899-286912-EIC SEARCH

JP 2000087026

A

20000328

JP 1998-261528

1998

0916

PRIORITY APPLN. INFO.:

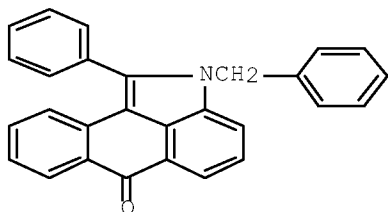
JP 1998-261528

1998

0916

ED Entered STN: 28 Mar 2000

GI



I

AB The invention refers to an organic ~~electroluminescent~~ component comprised of I.

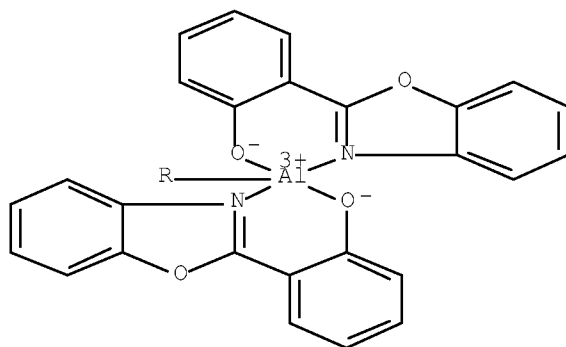
IT 203518-71-2

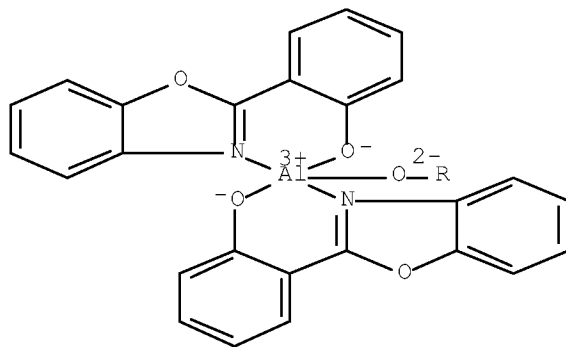
RL: DEV (Device component use); USES (Uses)  
(organic ~~electroluminescence~~ device)

RN 203518-71-2 HCAPLUS

CN Aluminum, tetrakis[2-(2-benzoxazolyl-κN3)phenolato-κO]-  
μ-oxodi- (CA INDEX NAME)

PAGE 1-A





IC ICM C09K011-06  
ICS H05B033-14  
CC 73-11 (Optical, Electron, and Mass Spectroscopy and  
Other Related Properties)  
ST org electroluminescent device  
IT Electroluminescent devices  
(organic electroluminescence device)  
IT 67-68-5, DMSO, uses 82-45-1, 1-Aminoanthraquinone 124-41-4,  
Sodium methoxide 1310-58-3, Potassium hydroxide, uses  
2085-33-8, Aluminum tris(8-hydroxyquinolinato) 7429-90-5,  
Aluminum, uses 7439-93-2, Lithium, uses 50926-11-9, Indium tin  
oxide 52905-45-0, Benziloyl chloride 80772-75-4 123847-85-8  
124729-98-2 203518-71-2  
RL: DEV (Device component use); USES (Uses)  
(organic electroluminescence device)

L15 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2000:123228 HCAPLUS Full-text

DOCUMENT NUMBER: 132:173455

TITLE: Full color optical printer head made of  
organic electroluminescent device

INVENTOR(S): Tsuruoka, Sigehisa; Fukuda, Tatsuo; Shimizu,  
Yukihiko; Kobori, Yoichi

PATENT ASSIGNEE(S): Futaba Denshi Kogyo Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2000052591	A	20000222	JP 1998-227218	

1998  
0811

PRIORITY APPLN. INFO.: JP 1998-227218

1998  
0811

ED Entered STN: 23 Feb 2000

# 10/590,899-286912-EIC SEARCH

AB The full color optical printer head made of an organic electroluminescent device forms an image with lights from the organic electroluminescent device, wherein the organic electroluminescent device has emission in 450-650 nm range. The printer head is small and light and requires a little power consumption and provides the stable operation.

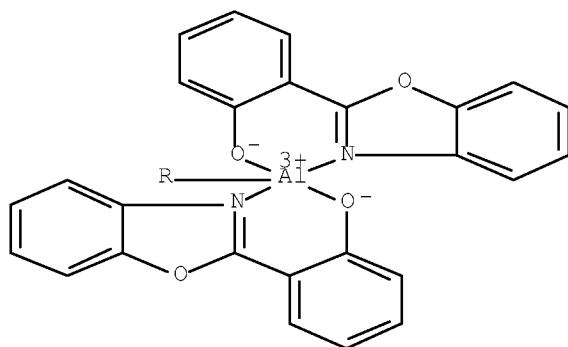
IT 203518-71-2

RL: TEM (Technical or engineered material use); USES (Uses)  
(organic electroluminescent device of full color optical printer head)

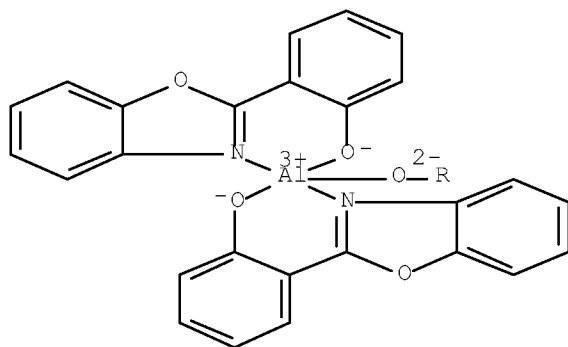
RN 203518-71-2 HCAPLUS

CN Aluminum, tetrakis[2-(2-benzoxazolyl-κN3)phenolato-κO]-μ-oxodi- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



IC ICM B41J002-44

ICS B41J002-45; B41J002-455; C09K011-06; H01L033-00; H04N001-036; H05B033-12; H05B033-14

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 73

ST optical printer head electroluminescent device

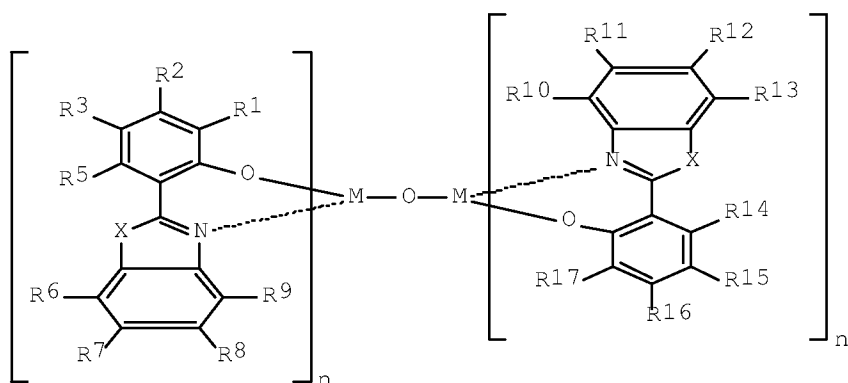
## 10/590,899-286912-EIC SEARCH

IT Electroluminescent devices  
 Optical imaging devices  
 Recording apparatus  
 (full color optical printer head made of organic electroluminescent device)  
 IT 517-51-1 2085-33-8 6543-20-0 25067-59-8 58280-31-2  
 65181-78-4 163226-12-8 203518-71-2 258849-77-3  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (organic electroluminescent device of full color optical printer head)

L15 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1998:724331 HCAPLUS Full-text  
 DOCUMENT NUMBER: 130:45102  
 TITLE: Organic electroluminescent materials and organic electroluminescent devices using them  
 INVENTOR(S): Tamano, Michiko; Onikubo, Shunichi; Okutsu, Satoshi; Enokida, Toshio  
 PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10298545	A	19981110	JP 1997-112087	1997 0430
JP 3832018	B2	20061011		
PRIORITY APPLN. INFO.:			JP 1997-112087	1997 0430

OTHER SOURCE(S): MARPAT 130:45102  
 ED Entered STN: 16 Nov 1998  
 GI



AB The material has a formula I (X = S, O, CH<sub>2</sub>; R<sub>1-17</sub> = H, halogen, cyano, alkyl, alkoxy, aryl, aryloxy, NH<sub>2</sub>, heterocyclic; R<sub>1-17</sub> may bond to form a ring; M = divalent or trivalent metal atom; n = 1, 2). The device shows high luminance and excellent stability in repeated use.

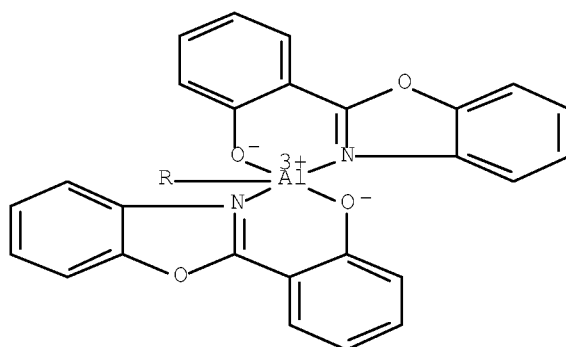
IT 203518-71-2 216884-53-6 216884-58-1  
216884-61-6

RL: DEV (Device component use); USES (Uses)  
(organic electroluminescent devices containing metal chelate complexes)

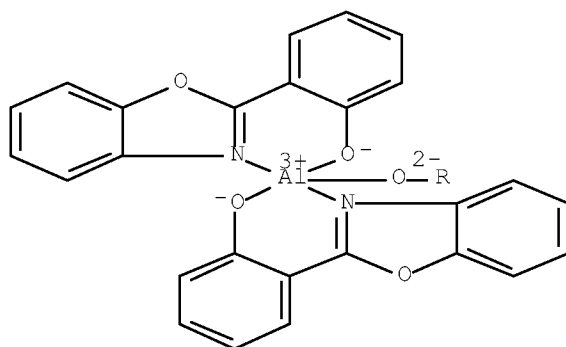
RN 203518-71-2 HCAPLUS

CN Aluminum, tetrakis[2-(2-benzoxazolyl-κN3)phenolato-κO]-μ-oxodi- (CA INDEX NAME)

PAGE 1-A

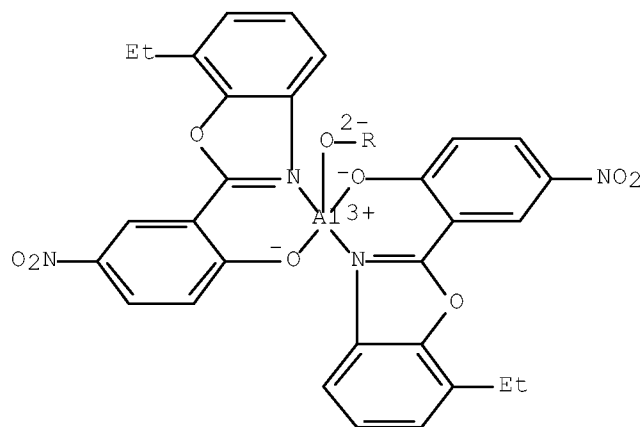
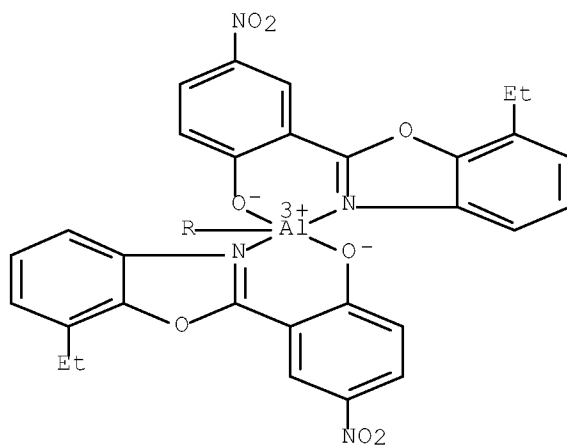


PAGE 2-A



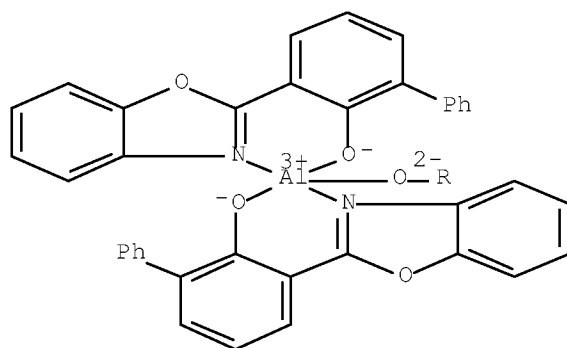
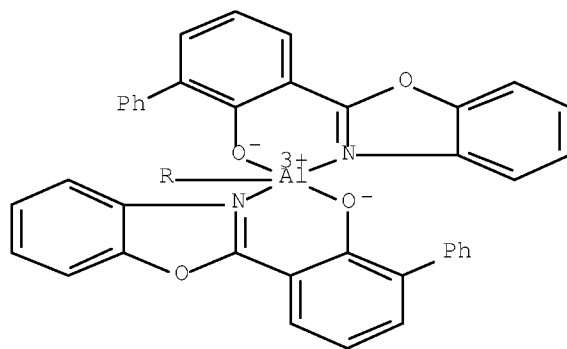
RN 216884-53-6 HCAPLUS

CN Aluminum, tetrakis[2-(7-ethyl-2-benzoxazolyl-κN3)-4-nitrophenolato-κO]-μ-oxodi- (9CI) (CA INDEX NAME)

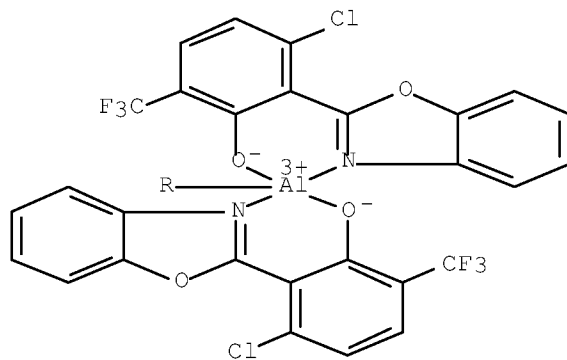


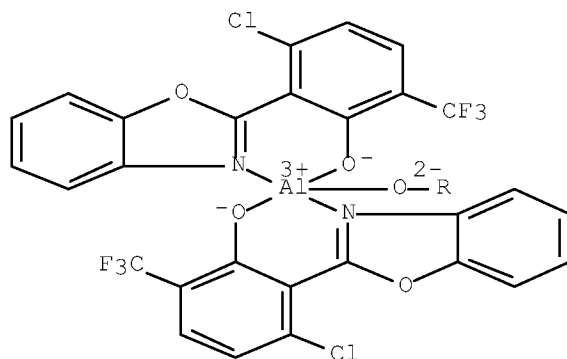
RN 216884-58-1 HCAPLUS

CN Aluminum, tetrakis[3-(2-benzoxazolyl-κN3) [1,1'-biphenyl]-2-  
olato-κO]-μ-oxodi- (CA INDEX NAME)



RN 216884-61-6 HCAPLUS  
 CN Aluminum, tetrakis[2-(2-benzoxazolyl-κN3)-3-chloro-6-(trifluoromethyl)phenolato-κO]-μ-oxodi- (CA INDEX NAME)





IC ICM C09K011-06  
ICS H05B033-14; H05B033-22  
CC 73-11 (Optical, Electron, and Mass Spectroscopy and  
Other Related Properties)  
Section cross-reference(s): 78  
ST electroluminescent device metal chelate arom complex  
IT Phosphors  
(electroluminescent; organic electroluminescent  
devices containing metal chelate complexes)  
IT Electroluminescent devices  
(organic electroluminescent devices containing metal chelate  
complexes)  
IT Chelates  
RL: DEV (Device component use); USES (Uses)  
(organic electroluminescent devices containing metal chelate  
complexes)  
IT 203518-71-2 216884-51-4 216884-52-5  
216884-53-6 216884-54-7 216884-55-8 216884-56-9  
216884-57-0 216884-58-1 216884-59-2 216884-60-5  
216884-61-6 216884-62-7 216884-63-8 216884-64-9  
216967-42-9 216968-58-0 216969-43-6 216969-65-2  
RL: DEV (Device component use); USES (Uses)  
(organic electroluminescent devices containing metal chelate  
complexes)

L15 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1998:586480 HCAPLUS Full-text  
DOCUMENT NUMBER: 129:223058  
ORIGINAL REFERENCE NO.: 129:45216a  
TITLE: Organic electroluminescent device  
with multicolor emission  
INVENTOR(S): Takahashi, Hisamitsu; Tsuruoka, Masahisa;  
Tanaka, Akira; Miyauchi, Kazuo  
PATENT ASSIGNEE(S): Futaba Denshi Kogyo Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent

## 10/590,899-286912-EIC SEARCH

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10237439	A	19980908	JP 1997-37781	1997 0221
JP 3744103	B2	20060208	JP 1997-37781	1997 0221

PRIORITY APPLN. INFO.:  
 1997  
0221

ED Entered STN: 15 Sep 1998

AB The device has a pair of electrodes sandwiching a laminate comprising (A) an electron-transporting layer, (B) an organic ~~light-emitting~~ layer containing an Al complex having a benzoxazol backbone-containing ligand, (C) and a pos.-hole transporting layer. The device has multicolor emission.

IT 203518-71-2

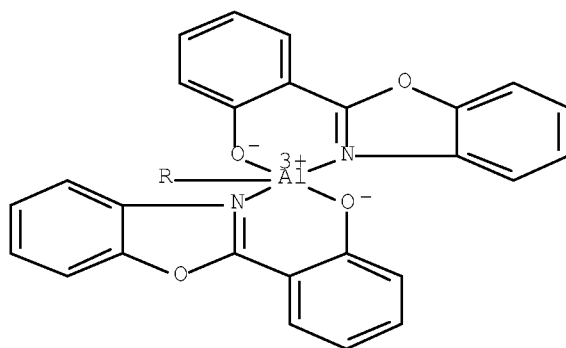
RL: DEV (Device component use); MOA (Modifier or additive use);  
 USES (Uses)

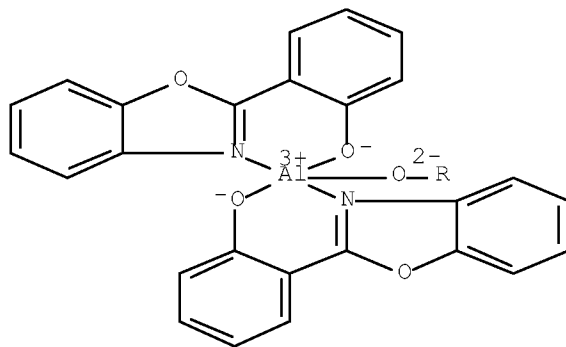
(organic electroluminescent device containing Al complex  
 having benzoxazol backbone-containing ligand with multicolor  
 emission)

RN 203518-71-2 HCAPLUS

CN Aluminum, tetrakis[2-(2-benzoxazolyl-κN3)phenolato-κO]-  
 μ-oxodi- (CA INDEX NAME)

PAGE 1-A





IC ICM C09K011-06  
 CC 73-12 (Optical, Electron, and Mass Spectroscopy and  
 Other Related Properties)  
 ST **electroluminescent** device aluminum complex benzoxazol  
 ligand; multicolor emission **electroluminescent** device  
 benzoxal  
 IT **Electroluminescent** devices  
 (organic **electroluminescent** device containing Al complex  
 having benzoxazol backbone-containing ligand with multicolor  
 emission)  
 IT 806-71-3, Tetraphenyl butadiene 6543-20-0,  
 Tri(biphenyl-4-yl)amine  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (dopant; organic **electroluminescent** device containing Al  
 complex having benzoxazol backbone-containing ligand with  
 multicolor emission)  
 IT 203518-71-2  
 RL: DEV (Device component use); MOA (Modifier or additive use);  
 USES (Uses)  
 (organic **electroluminescent** device containing Al complex  
 having benzoxazol backbone-containing ligand with multicolor  
 emission)

L15 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1998:71651 HCAPLUS Full-text  
 DOCUMENT NUMBER: 128:198541  
 ORIGINAL REFERENCE NO.: 128:39121a,39124a  
 TITLE: Organic **electroluminescent** material  
 with high blue emission and device using it  
 INVENTOR(S): Takahashi, Naomitsu; Tsuoka, Nobuhisa; Tanaka,  
 Tetsu; Miyauchi, Kazuo  
 PATENT ASSIGNEE(S): Futaba Denshi Kogyo Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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# 10/590,899-286912-EIC SEARCH

JP 10025472 A 19980127 JP 1996-183610  
 JP 3752734 B2 20060308  
 US 6048631 A 20000411 US 1997-893757

1996  
 0712

1997  
 0711

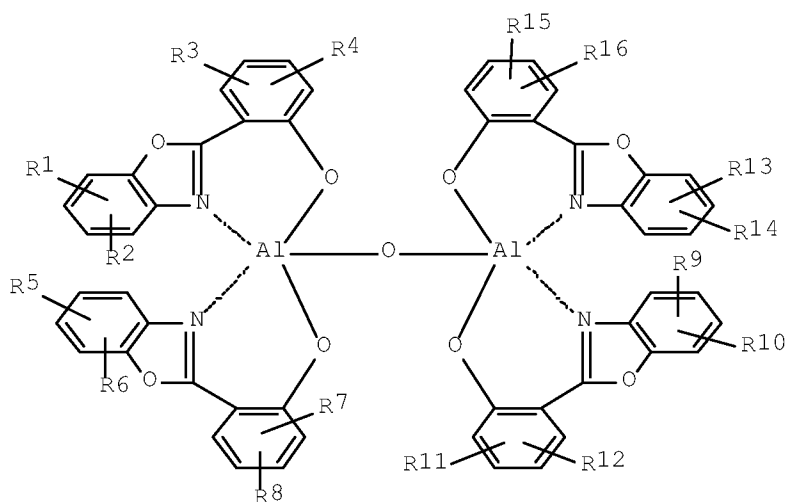
PRIORITY APPLN. INFO.:

JP 1996-183610

A

1996  
 0712

OTHER SOURCE(S): MARPAT 128:198541  
 ED Entered STN: 06 Feb 1998  
 GI



I

AB The title material is an Al complex with a ligand having 2-(2-hydroxyphenyl)benzoxazole structure I (R1-16 = H, substituent). The electroluminescent device has an organic light-emitting layer containing I sandwiched between an electron-transporting layer and a hole-transporting layer. The material shows good heat resistance and high-purity blue emission and the device shows storage stability.

IT 203518-71-2P 203518-72-3P 203518-73-4P  
 203518-74-5P 203518-75-6P 203518-76-7P  
 203518-77-8P 203518-78-9P 203518-79-0P  
 203518-80-3P

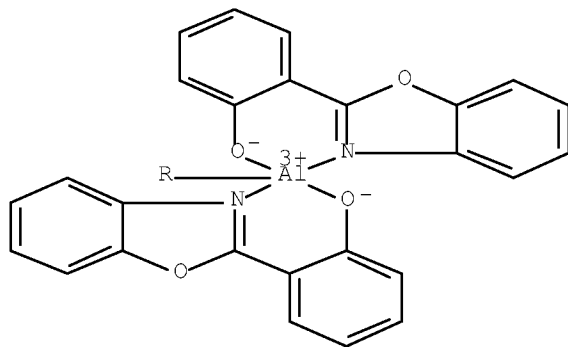
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(aluminum complex organic electroluminescent material with high blue emission)

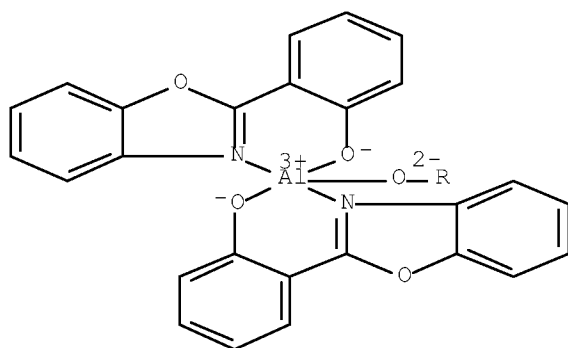
RN 203518-71-2 HCAPLUS

CN Aluminum, tetrakis[2-(2-benzoxazolyl-κN3)phenolato-κO]-μ-oxodi- (CA INDEX NAME)

PAGE 1-A

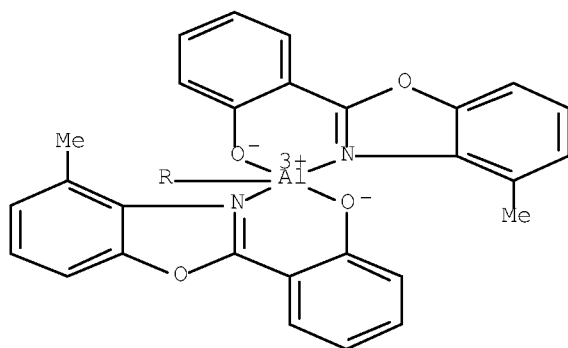


PAGE 2-A

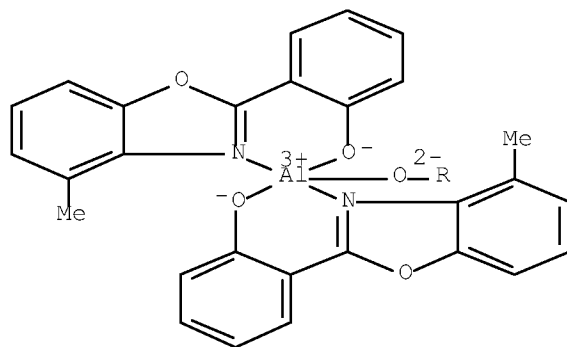


RN 203518-72-3 HCAPLUS  
 CN Aluminum, tetrakis[2-(4-methyl-2-benzoxazolyl-κN3)phenolato-κO]-μ-oxodi- (9CI) (CA INDEX NAME)

PAGE 1-A

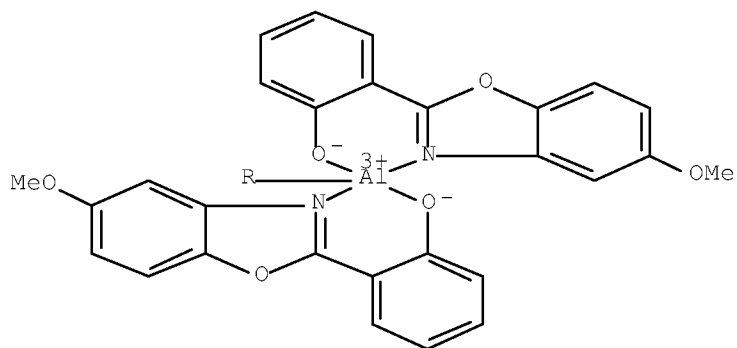


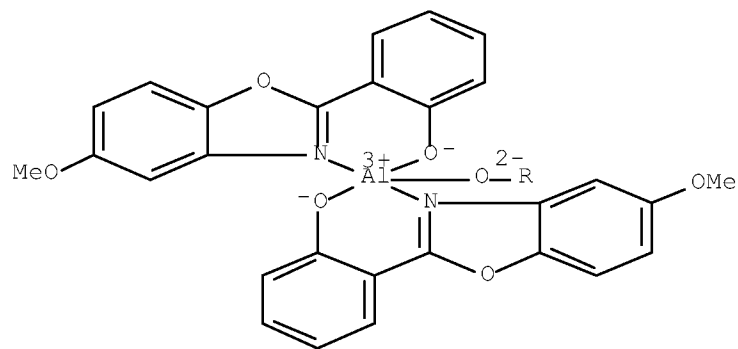
PAGE 2-A



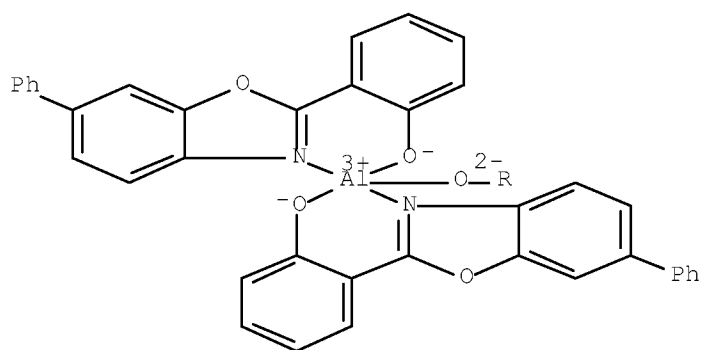
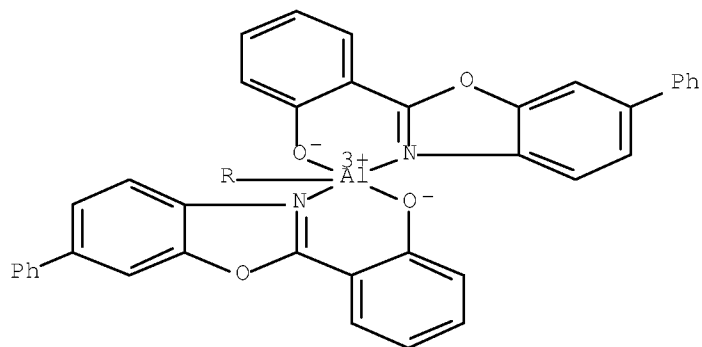
RN 203518-73-4 HCAPLUS  
 CN Aluminum, tetrakis[2-(5-methoxy-2-benzoxazolyl-κN3)phenolato-  
 κO]-μ-oxodi- (9CI) (CA INDEX NAME)

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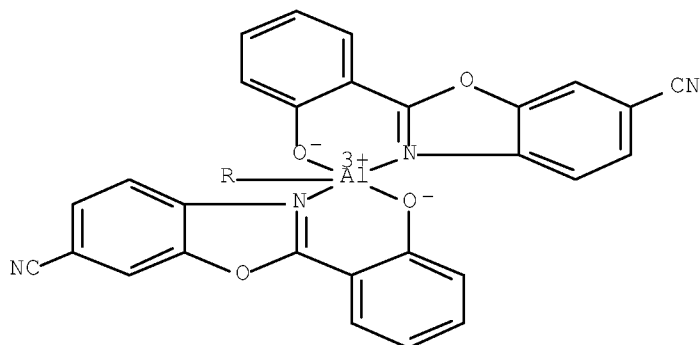
RN 203518-74-5 HCAPLUS

CN Aluminum,  $\mu$ -oxotetrakis[2-(6-phenyl-2-benzoxazolyl- $\kappa$ N3)phenolato- $\kappa$ O]di- (9CI) (CA INDEX NAME)

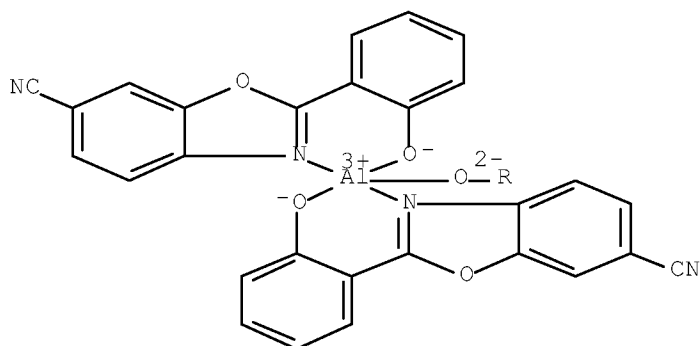
# 10/590,899-286912-EIC SEARCH

RN 203518-75-6 HCAPLUS  
 CN Aluminum, tetrakis[2-[2-(hydroxy-κO)phenyl]-6-benzoxazolecarbonitrilato-κN3]-μ-oxodi- (CA INDEX NAME)

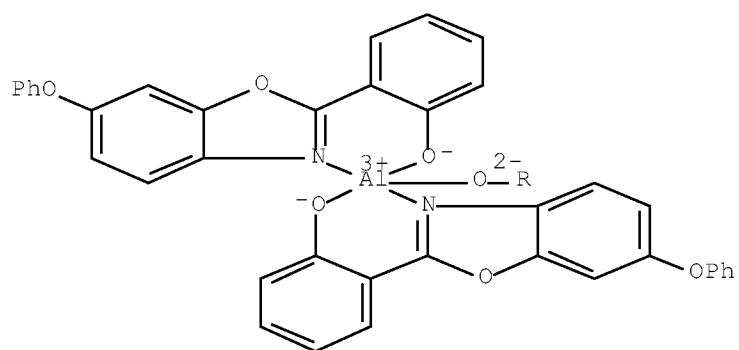
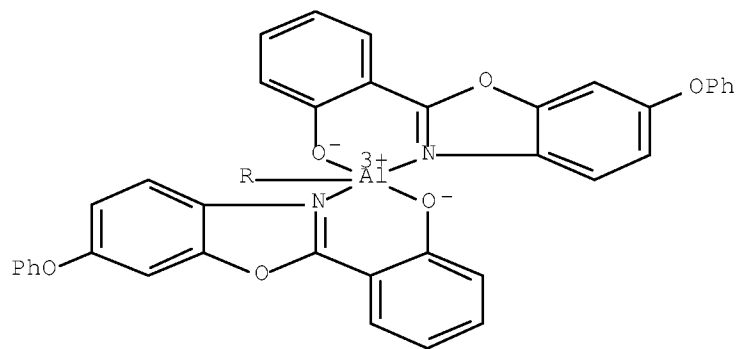
PAGE 1-A



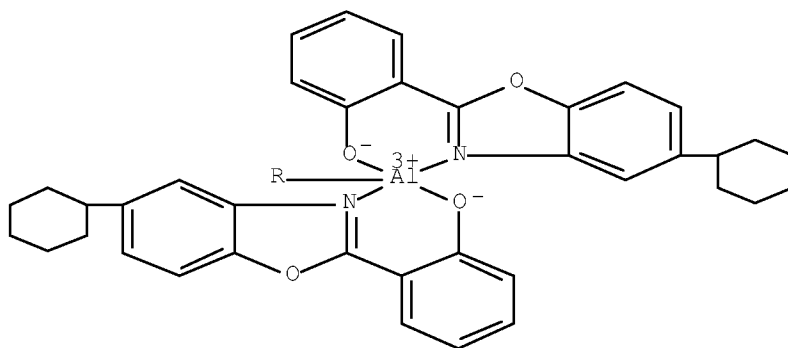
PAGE 2-A



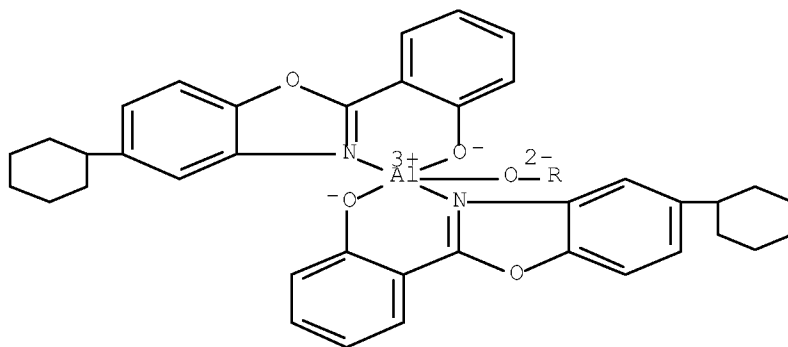
RN 203518-76-7 HCAPLUS  
 CN Aluminum, μ-oxotetrakis[2-(6-phenoxy-2-benzoxazolyl-κN3)phenolato-κO]di- (9CI) (CA INDEX NAME)



RN 203518-77-8 HCAPLUS  
 CN Aluminum, tetrakis[2-(5-cyclohexyl-2-benzoxazolyl-  
 κN3)phenolato-κO]-μ-oxodi- (9CI) (CA INDEX NAME)

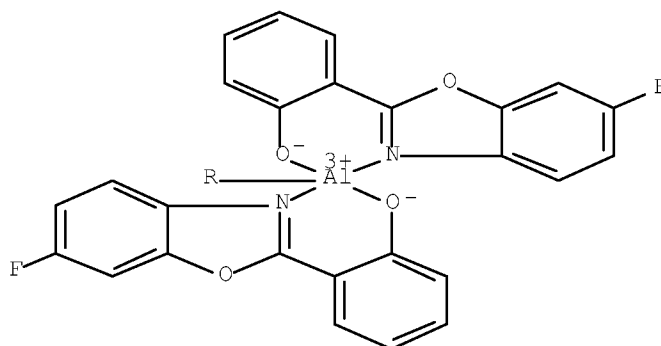


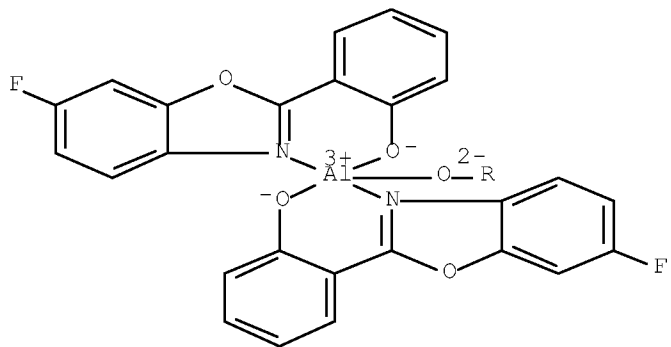
PAGE 2-A



RN 203518-78-9 HCAPLUS  
 CN Aluminum, tetrakis[2-(6-fluoro-2-benzoxazolyl-κN3)phenolato-  
 κO]-μ-oxodi- (9CI) (CA INDEX NAME)

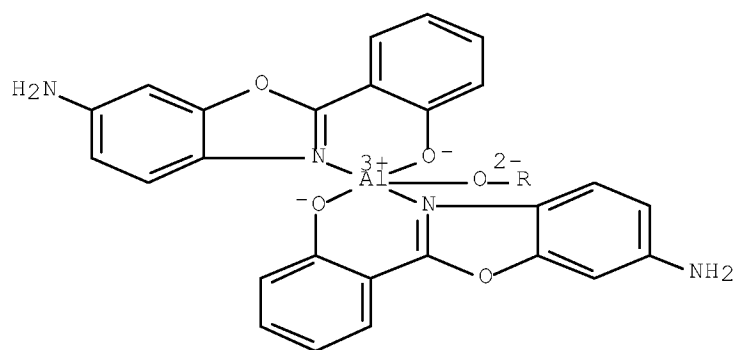
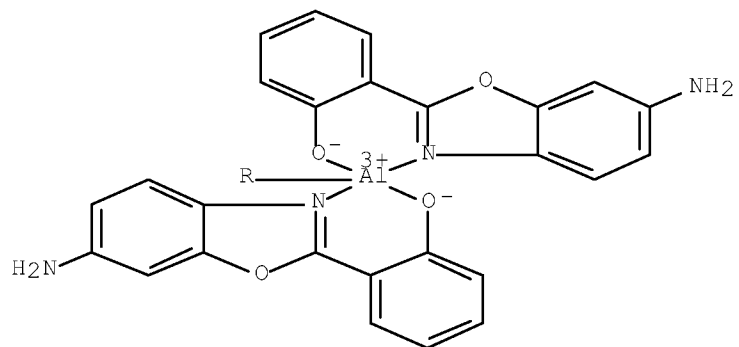
PAGE 1-A





RN 203518-79-0 HCAPLUS

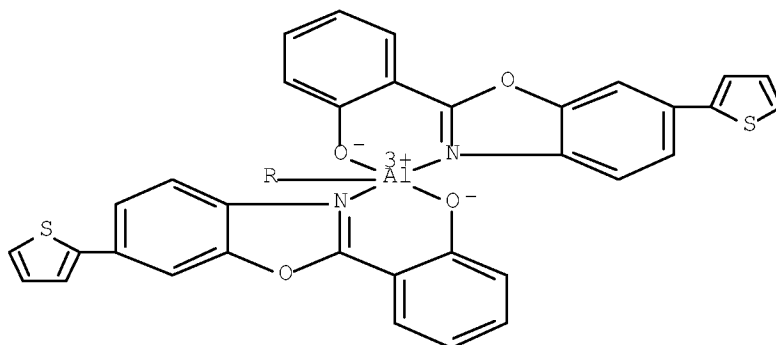
CN Aluminum, tetrakis[2-(6-amino-2-benzoxazolyl-κN3)phenolato-κO]-μ-oxodi- (9CI) (CA INDEX NAME)



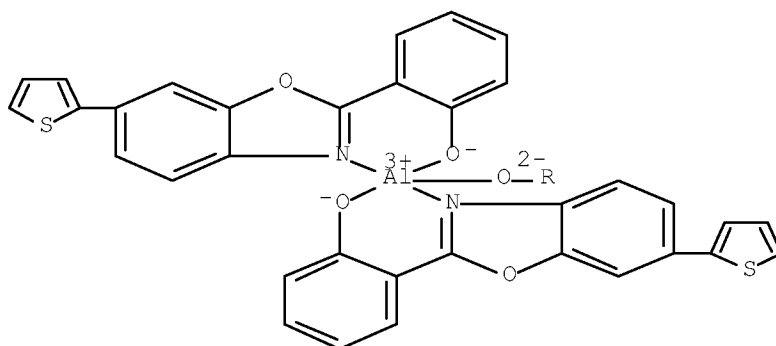
# 10/590,899-286912-EIC SEARCH

RN 203518-80-3 HCAPLUS  
 CN Aluminum,  $\mu$ -oxotetrakis[2-[6-(2-thienyl)-2-benzoxazolyl]- $\kappa$ N3]phenolato- $\kappa$ O]di- (9CI) (CA INDEX NAME)

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IC ICM C09K011-06  
 ICS H05B033-14  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and  
 Other Related Properties)  
 Section cross-reference(s): 28  
 ST aluminum complex hydroxyphenyl benzoxazole blue phosphor;  
 electroluminescent device blue emission heat resistance  
 IT Electroluminescent devices  
 Phosphors  
 (aluminum complex organic electroluminescent material  
 with high blue emission)  
 IT 203518-71-2P 203518-72-3P 203518-73-4P  
 203518-74-5P 203518-75-6P 203518-76-7P  
 203518-77-8P 203518-78-9P 203518-79-0P

## 10/590,899-286912-EIC SEARCH

203518-80-3P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES  
(Uses)

(aluminum complex organic **electroluminescent** material  
with high blue emission)

IT 835-64-3, 2-(2-Hydroxyphenyl)benzoxazole 98792-64-4,  
2-(2-Hydroxyphenyl)-6-aminobenzoxazole 154674-44-9  
203518-81-4, 2-(2-Hydroxyphenyl)-4-methylbenzoxazole  
203518-82-5, 2-(2-Hydroxyphenyl)-5-methoxybenzoxazole  
203518-83-6, 2-(2-Hydroxyphenyl)-6-phenylbenzoxazole  
203518-84-7, 2-(2-Hydroxyphenyl)-6-cyanobenzoxazole 203518-85-8,  
2-(2-Hydroxyphenyl)-6-phenoxybenzoxazole 203518-86-9,  
2-(2-Hydroxyphenyl)-5-cyclohexylbenzoxazole 203518-87-0,  
2-(2-Hydroxyphenyl)-6-fluorobenzoxazole 203518-90-5,  
2-(2-Hydroxyphenyl)-6-(2-thienyl)benzoxazole  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(aluminum complex organic **electroluminescent** material  
with high blue emission)

L15 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:129550 HCAPLUS Full-text

DOCUMENT NUMBER: 126:137448

ORIGINAL REFERENCE NO.: 126:26447a,26450a

TITLE: Optical instrument containing aluminum complex  
showing high electron transporting property

INVENTOR(S): Kishii, Noryuki; Andoryuu, Hadoson

PATENT ASSIGNEE(S): Sony Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

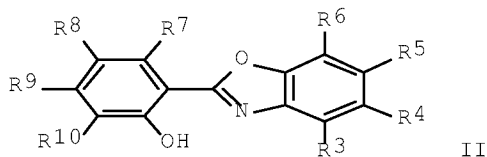
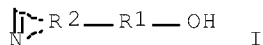
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 08315982	A	19961129	JP 1995-138618	1995 0512
JP 3599131	B2	20041208		
PRIORITY APPLN. INFO.:			JP 1995-138618	1995 0512

OTHER SOURCE(S): MARPAT 126:137448

ED Entered STN: 26 Feb 1997

GI

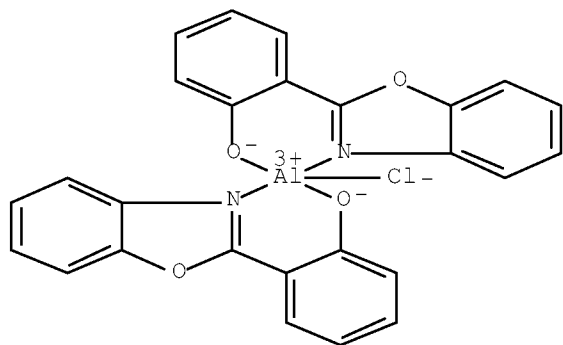


AB The instrument includes an emitting layer and/or an electron-transporting layer containing  $\text{Al}(\text{L}-\text{O})_2\text{X}$  [L = a ligand preferably OH- and aromatic N-containing compound derived from I [R1, R2 = atomic groups or substituents]; X = an anion preferably halo, alkoxy, phenoxy]. The ligand L may be o-hydroxyphenylbenzoxazole derivative II [R3-10 = H, halo, OH, NO2, carboxy, carbonyl, amino, amide, sulfonyl, or alkyl, aryl, or heterocycle (un)substituted with above groups]. The instrument shows plural color tones according to applied elec. voltage.

IT 186407-79-4P  
 RL: DEV (Device component use); PNU (Preparation, unclassified);  
 PREP (Preparation); USES (Uses)  
 (optical instrument containing aluminum complex showing high electron transporting property)

RN 186407-79-4 HCAPLUS

CN Aluminum, bis[2-(2-benzoxazolyl-κN3)phenolato-κO]chloro- (CA INDEX NAME)



IC ICM H05B033-14

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 Section cross-reference(s): 29

ST electroluminescent device aluminum complex electron transporting; optical instrument aluminum benzoxazole complex

IT Electroluminescent devices  
 (optical instrument containing aluminum complex showing high electron transporting property)

IT 148-24-3, 8-Quinolinol, reactions 835-64-3,  
 2-(o-Hydroxyphenyl)benzoxazole 7446-70-0, Aluminum chloride, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in preparation of electron-transporting aluminum complex for electroluminescent device)

IT 186407-79-4P  
 RL: DEV (Device component use); PNU (Preparation, unclassified);  
 PREP (Preparation); USES (Uses)  
 (optical instrument containing aluminum complex showing high electron transporting property)

L15 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1996:621270 HCAPLUS Full-text  
 DOCUMENT NUMBER: 125:260738  
 ORIGINAL REFERENCE NO.: 125:48443a,48446a

# 10/590,899-286912-EIC SEARCH

TITLE: Organometallic complexes with built-in  
fluorescent dyes for use in light  
emitting devices  
INVENTOR(S): Shi, Song Q.  
PATENT ASSIGNEE(S): Motorola, Inc., USA  
SOURCE: Eur. Pat. Appl., 22 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 726304	A2	19960814	EP 1996-102076	1996 0213
EP 726304 R: DE, FR, GB	A3	19970326		
US 5552547	A	19960903	US 1995-387691	1995 0213
JP 09095620	A	19970408	JP 1996-61582	1996 0213
JP 4049832 TW 401453	B2 B	20080220 20000811	TW 1996-85101799	1996 0213
PRIORITY APPLN. INFO.:			US 1995-387691	A 1995 0213

OTHER SOURCE(S): MARPAT 125:260738

ED Entered STN: 19 Oct 1996

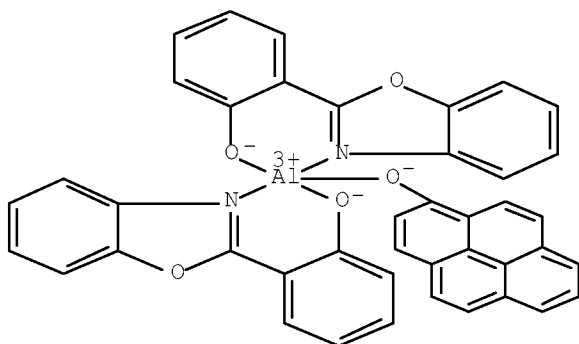
AB Organometallic complexes with attached fluorescent dye groups are described by the general formula L1(L2)M-O-L3 (M = a trivalent metal ion; L1 and L2 are ligands that form a complex with M; and L3 is a fluorescent dye group). Preparation of the complexes entails reacting a mixture of L1, L2, and L3OH with MX3 (X = an anionic group, including halide, sulfate, or nitrate groups) in the presence of base. Electroluminescent devices employing the complexes are also described; the complexes may be introduced into an organic electroluminescent device by thoroughly pre-mixing them with a host organometallic emitter in a certain ratio and co-depositing it from a single source. The organometallic complex with fluorescent dye groups dets. the emission color.

IT 182135-27-9P

RL: DEV (Device component use); IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(organometallic complexes with attached fluorescent dye-groups and their preparation and light-emitting devices using them)

RN 182135-27-9 HCAPLUS

CN Aluminum, bis[2-(2-benzoxazolyl)phenolato-N2,O1](1-pyrenolato)-(9CI) (CA INDEX NAME)



IC ICM C09K011-06  
ICS H05B033-14

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other  
Related Properties)  
Section cross-reference(s): 29, 76

ST fluorescent organometallic complex ~~electroluminescent~~  
device

IT **Electroluminescent** devices  
Fluorescent substances  
(organometallic complexes with attached fluorescent dye-groups  
and their preparation and ~~light-emitting~~ devices  
using them)

IT 182135-21-3P 182135-24-6P 182135-27-9P  
RL: DEV (Device component use); IMF (Industrial manufacture); SPN  
(Synthetic preparation); PREP (Preparation); USES (Uses)  
(organometallic complexes with attached fluorescent dye-groups  
and their preparation and ~~light-emitting~~ devices  
using them)

IT 961-80-8, 2-Naphthacenol 3682-83-5 6528-53-6,  
1,3,6,8-Pyrenetetrasulfonic acid 23986-10-9 56892-30-9,  
Benzo[a]pyren-2-ol 58851-99-3 63019-38-5, 1-Chrysenol  
78751-58-3, 2-Hydroxypyrene 112553-55-6, 2-Perylenol  
112553-56-7, 3-Perylenol 115123-32-5, 2-Pentacenol 182135-56-4  
182135-61-1 182135-67-7 182135-70-2 182135-73-5  
RL: NUU (Other use, unclassified); USES (Uses)  
(organometallic complexes with attached fluorescent dye-groups  
and their preparation and ~~light-emitting~~ devices  
using them)

IT 90-33-5, 7-Hydroxy-4-methylcoumarin 555-31-7, Aluminum  
isopropoxide 826-81-3, 8-Hydroxyquinaldine 835-64-3,  
2-(2-Hydroxyphenyl)benzoxazole 5315-79-7, 1-Hydroxypyrene  
7446-70-0, Aluminum trichloride, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(organometallic complexes with attached fluorescent dye-groups  
and their preparation and ~~light-emitting~~ devices  
using them)

L15 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1996:268102 HCAPLUS Full-text  
DOCUMENT NUMBER: 124:301973  
ORIGINAL REFERENCE NO.: 124:55723a,55726a  
TITLE: New organometallic complexes for use in  
~~light emitting~~ devices  
INVENTOR(S): Shi, Song Q.

# 10/590,899-286912-EIC SEARCH

PATENT ASSIGNEE(S): Motorola, Inc., USA  
 SOURCE: Eur. Pat. Appl., 19 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 700917	A2	19960313	EP 1995-114039	1995 0907
EP 700917	A3	19990317		
EP 700917	B1	20020508		
R: DE, GB				
JP 08081472	A	19960326	JP 1995-256962	1995 0908
JP 2937827	B2	19990823		
PRIORITY APPLN. INFO.:			US 1994-304451	A 1994 0912

ED Entered STN: 08 May 1996  
 GI

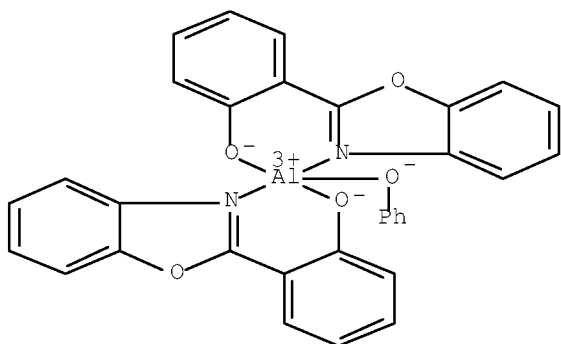
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
 \*

AB Organometallic complexes for use in ~~electroluminescent~~ (EL) devices are described by the general formulas I and II (M2 = a divalent metal; M3 = a trivalent metal; X = O, S, NH, or CH2; R1-8 = H or hydrocarbon groups or functional groups; and L1-5 = H or hydrocarbon groups or functional groups). The organometallic complexes may be prepared by mixing organic ligands with metal salts. ~~Electroluminescent~~ devices employing the organometallic materials in the ~~light emission~~ layers are also described. Fabrication of the devices entails sequential formation on a glass substrate of a transparent conductor layer, a hole-transporting layer, an emitting layer comprising the complexes, and a conductive layer.

IT 176045-96-8P  
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (organometallic complexes for use in ~~light-~~  
~~emitting~~ devices and their preparation and the devices and  
 their fabrication)

RN 176045-96-8 HCAPLUS

CN Aluminum, bis[2-(2-benzoxazolyl-κN3)phenolato-  
 κO]phenoxy- (CA INDEX NAME)



IC ICM C07F005-00  
ICS H01L033-00

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other  
Related Properties)  
Section cross-reference(s): 29

ST light emitting device organometallic complex

IT Electroluminescent devices  
(organometallic complexes for use in light-  
emitting devices and their preparation and the devices and  
their fabrication)

IT 7439-95-4D, Magnesium, compds. 7440-55-3D, Gallium, compds.  
7440-74-6D, Indium, compds. 23467-27-8  
RL: DEV (Device component use); USES (Uses)  
(organometallic complexes for use in light-  
emitting devices and their preparation and the devices and  
their fabrication)

IT 128904-10-9P 176045-96-8P  
RL: DEV (Device component use); SPN (Synthetic preparation); PREP  
(Preparation); USES (Uses)  
(organometallic complexes for use in light-  
emitting devices and their preparation and the devices and  
their fabrication)

IT 108-95-2, Phenol, reactions 835-64-3,  
2-(2-Hydroxyphenyl)benzoxazole 2963-66-8,  
2-(2-Hydroxyphenyl)benzimidazole 3411-95-8,  
2-(2-Hydroxyphenyl)benzothiazole 7446-70-0, Aluminum chloride,  
reactions 13510-49-1, Beryllium sulfate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(organometallic complexes for use in light-  
emitting devices and their preparation and the devices and  
their fabrication)

# 10/590,899-286912-EIC SEARCH

## FULL SEARCH HISTORY

=> d his nofile

(FILE 'HOME' ENTERED AT 08:26:59 ON 10 MAR 2009)

FILE 'HCAPLUS' ENTERED AT 08:27:13 ON 10 MAR 2009

E US20070254182?PN

E US20070254182/PN

L1 1 SEA SPE=ON ABB=ON PLU=ON US20070254182/PN  
D ALL  
SEL RN

FILE 'REGISTRY' ENTERED AT 08:28:11 ON 10 MAR 2009

L2 9 SEA SPE=ON ABB=ON PLU=ON (203518-71-2/BI OR  
2085-33-8/BI OR 286383-62-8/BI OR 50926-11-9/BI OR  
555-31-7/BI OR 693794-98-8/BI OR 7429-90-5/BI OR  
7789-24-4/BI OR 835-64-3/BI)  
D SCA

E "PHENOL, 2-(2-BENZOXAZOLYL)-"/CN

L3 1 SEA SPE=ON ABB=ON PLU=ON "PHENOL, 2-(2-BENZOXAZOLYL)  
-"/CN  
D CN  
D RSD

L4 1 SEA SPE=ON ABB=ON PLU=ON L2 AND 2/AL  
D RSD  
E 12500.71/RID

L5 22 SEA SPE=ON ABB=ON PLU=ON 12500.71/RID

FILE 'STNGUIDE' ENTERED AT 08:37:23 ON 10 MAR 2009

FILE 'REGISTRY' ENTERED AT 08:39:26 ON 10 MAR 2009

L6 2 SEA SPE=ON ABB=ON PLU=ON L2 AND L5

FILE 'STNGUIDE' ENTERED AT 08:40:21 ON 10 MAR 2009

FILE 'HCAPLUS' ENTERED AT 08:41:23 ON 10 MAR 2009

L7 18 SEA SPE=ON ABB=ON PLU=ON L5  
L8 11 SEA SPE=ON ABB=ON PLU=ON L6  
L9 18 SEA SPE=ON ABB=ON PLU=ON L7 OR L8  
D SCA

FILE 'STNGUIDE' ENTERED AT 08:42:04 ON 10 MAR 2009

FILE 'HCAPLUS' ENTERED AT 08:44:18 ON 10 MAR 2009

E 73/SC, SX

L10 1524519 SEA SPE=ON ABB=ON PLU=ON 73/SC, SX  
L11 17 SEA SPE=ON ABB=ON PLU=ON L9 AND L10  
L12 1 SEA SPE=ON ABB=ON PLU=ON L9 NOT L11  
L13 QUE SPE=ON ABB=ON PLU=ON ELECTROLUM!N? OR ORGANOLUM!  
N? OR (ELECTRO OR ORGANO OR ORG#) (2A) LUM!N? OR  
LIGHT?(2A) (EMIT? OR EMISSION?) OR EL OR E(W) L OR OLED  
OR L(W) E(W) D OR LED/IT  
L14 17 SEA SPE=ON ABB=ON PLU=ON L9 AND L13  
L15 18 SEA SPE=ON ABB=ON PLU=ON L11 OR L12 OR L14  
SAV TEMP L15 GAR899HCP/A  
D QUE STAT L15  
D QUE STAT L15  
D L15 1-18 IBIB ED ABS HITSTR HITIND